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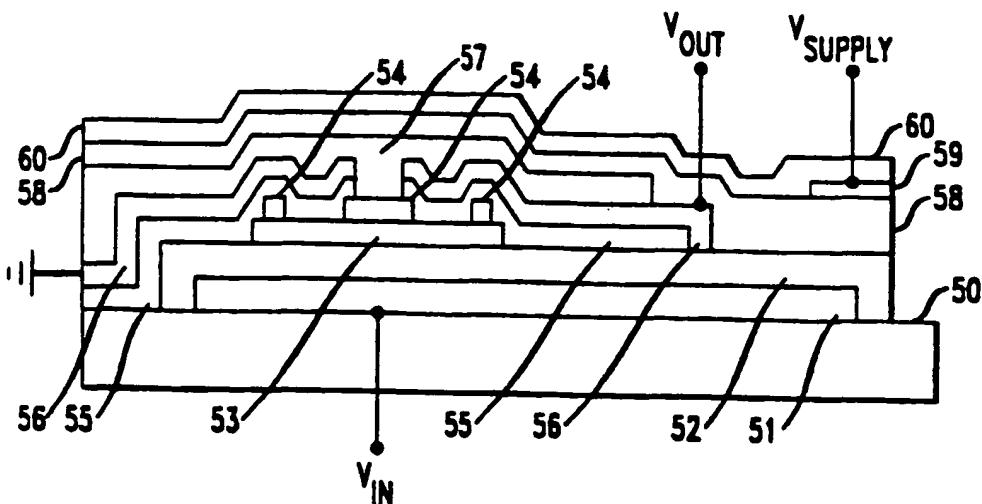
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### (54) Circuit comprising complementary thin film transistors

(57) In preferred embodiments of the invention, the n-channel inorganic TFTs have an amorphous Si active layer (53), and the p-channel organic TFTs have  $\alpha$ -hexathiienylene ( $\alpha$ -6T) active layer (58). Complementary

inverters according to the invention are disclosed, as is an exemplary processing sequence that can be used to manufacture integrated complementary inverters and other complementary circuits according to the invention.

FIG. 9





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## EUROPEAN SEARCH REPORT

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EP 97 30 0063

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
P, X	DODABALAPUR A ET AL: "Hybrid organic/inorganic complementary circuits" APPLIED PHYSICS LETTERS, 15 APRIL 1996, AIP, USA, vol. 68, no. 16, ISSN 0003-6951, pages 2246-2248, XP002055715 * the whole document *	1, 2, 4-6	H01L51/20 H01L51/30 H01L27/12
E	US 5 612 228 A (SHIEH CHAN-LONG ET AL) * column 2, line 3 - column 2, line 30; claims 1-18; figures 5,6 *	1, 2, 4-6	
A	PATENT ABSTRACTS OF JAPAN vol. 014, no. 016 (E-872), 12 January 1989 & JP 01 259563 A (MITSUBISHI ELECTRIC CORP), 17 October 1989, * abstract *	1, 2, 4	
D, A	DODABALAPUR A ET AL: "ORGANIC HETEROSTRUCTURE FIELD-EFFECT TRANSISTORS" SCIENCE, vol. 269, 15 September 1995, pages 1560-1562, XP000644688	---	TECHNICAL FIELDS SEARCHED (Int.Cl.6) H01L
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	16 February 1998	Königstein, C	
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone	T : theory or principle underlying the invention		
Y : particularly relevant if combined with another document of the same category	E : earlier patent document, but published on or after the filing date		
A : technological background	D : document cited in the application		
O : non-written disclosure	L : document cited for other reasons		
P : intermediate document	& : member of the same patent family, corresponding document		